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(FILE 'USPAT' ENTERED AT 13:49:53 ON 16 FEB 1999)
L1 28346 S CELLULOSE ACETATE
L2 135 S (CELLULOSE ACETATE)/TI
L3 28346 S (CELLULOSE ACETATE) OR (HEMICELLULOSE ACETATE)(P)(ACIDIC FO
L4 28346 S L3 AND L1
L5 28346 S L3 OR L1
L6 135 S L2 AND L3
L7 0 S PKS AND L6
L8 2 S PKA AND L6
L9 0 S L2 AND (CELLULOSE ACETATE)(P)(ACIDIC FORM)
L10 33 S L2 AND (CELLULOSE ACETATE)(P)(FORMIC OR ACRYLIC OR MALONIC
L11 1 S L10 AND PKA
L12 0 S L10 AND (ALKALI METAL SALT) AND (ALKALINE EARTH METAL)
L13 203 S (CELLULOSE ACETATE)(P)(CARBOXYL GROUP#)
L14 36 S L13(P)BIND?
L15 2 S L14 AND (CELLULOSE ACETATE)/TI
L16 1 S L14 AND DOPE
L17 35 S L14 AND FILM
L18 0 S L17 AND SPINNABILITY

=> d l15 1 2 cit ab

1. 4,451,597, May 29, 1984, High solids color coat containing alcohol soluble **cellulose acetate** butyrate; Claus Victorius, 524/39; 427/409; 428/31, 402, 418; 524/40, 437, 512; 528/44, 48 [IMAGE AVAILABLE]

US PAT NO: 4,451,597 [IMAGE AVAILABLE] L15: 1 of 2

ABSTRACT:
The coating composition useful as the exterior finish on automobiles and trucks contains about 25-50% by weight of a binder of film-forming constituents and 50-75% by weight of a volatile organic solvent carrier and additionally contains 2-150% by weight, based on the weight of the binder, of pigment; the binder is about 20-70% by weight of an acrylic polymer containing reactive hydroxyl, carboxyl, amide groups or any mixture of such groups, about 0-40% by weight of a hydroxy-terminated polyester urethane resin and about 25-40% by weight of an alkylated melamine formaldehyde crosslinking resin; in addition the composition contains about 4-20% by weight, based on the weight of the binder, of a rheology control agent of an alcohol soluble cellulose acetate butyrate having a buryryl content of about 45-50% by weight, a hydroxyl content of about 4-5% by weight and a viscosity of about 0.2-0.4 second.

2. 3,676,377, Jul. 11, 1972, PROCESS FOR PREPARING A THERMOSETTING ACRYLIC ENAMEL MODIFIED WITH **CELLULOSE ACETATE** BUTYRATE; Terry P. Anderson, et al., 524/40; 428/63 [IMAGE AVAILABLE]

US PAT NO: 3,676,377 [IMAGE AVAILABLE] L15: 2 of 2

ABSTRACT:
The improved process for preparing a thermosetting acrylic enamel modified with cellulose acetate butyrate comprises the following steps:
1. forming pigment chips by mixing pigment particles, cellulose acetate

butyrate, and an organic plasticizer on a roll mill having one hot roll and one cold roll;

2. forming a mill base by dissolving the pigment chips prepared in Step (1) in an organic solvent;

3. blending the mill base with an acrylic polymer having free hydroxyl groups and carboxyl groups and with a melamine/formaldehyde resin which has been at least partially reacted with an aliphatic monohydric alcohol having one to four carbon atoms.

=> d l16 1 cit ab

1. 4,148,644, Apr. 10, 1979, Light-sensitive silver halide photographic materials; Hideyasu Ohta, et al., 430/140, 201 [IMAGE AVAILABLE]

US PAT NO: 4,148,644 [IMAGE AVAILABLE] L16: 1 of 1

ABSTRACT:
A light-sensitive silver halide photographic material having a cellulose ester film support coated on one side with a silver halide emulsion layer and on the other side with a non-light sensitive layer that is removable during an aqueous processing step. An optional portion of the non-light sensitive layer is coated with a magnetic recording layer formed from a dispersion containing at least 60% by weight of 2-ethoxyethanol. The resulting magnetic recording layer exhibits layer adhesion during subsequent development steps.

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L9 0 S L2 AND (CELLULOSE ACETATE)(P)(ACIDIC FORM)
L10 33 S L2 AND (CELLULOSE ACETATE)(P)(FORMIC OR ACRYLIC OR MALONIC
L11 1 S L10 AND PKA
L12 0 S L10 AND (ALKALI METAL SALT) AND (ALKALINE EARTH METAL)

=> d l11 1

1. 4,916,044, Apr. 10, 1990, Color diffusion transfer element with auxillary neutralizing layer comprising **cellulose acetate**; Hideki Tomiyama, 430/216; 428/507, 514, 532; 430/454, 463 [IMAGE AVAILABLE]

=> d l10 1-33 cit ab

1. 5,705,632, Jan. 6, 1998, Process for the preparation of **cellulose acetate** film; Kazuhiro Shimoda, et al., 536/69, 76 [IMAGE AVAILABLE]

US PAT NO: 5,705,632 [IMAGE AVAILABLE] L10: 1 of 33

ABSTRACT:
A process for the preparation of a cellulose acetate film comprises the steps of: cooling a mixture of cellulose acetate and an organic solvent to -100.degree. to -10.degree. C.; warming the cooled mixture to 0.degree. to 50.degree. C. to dissolve the cellulose acetate in the organic solvent; casting the obtained solution on a support; and evaporating the organic solvent to form the cellulose acetate film. The cellulose acetate has an average acetic acid content in the range of 58.0 to 62.5%. The organic solvent is acetone.

2. 5,663,310, Sep. 2, 1997, **Cellulose acetate** solution and process for the preparation of the same; Kazuhiro Shimoda, et al., 536/69, 76 [IMAGE AVAILABLE]

US PAT NO: 5,663,310 [IMAGE AVAILABLE] L10: 2 of 33

ABSTRACT:
A cellulose acetate solution has cellulose acetate in a solvent. The cellulose acetate has an average acetic acid content in the range of 58.0 to 62.5%. In the first embodiment of the invention, the solvent is a mixture of acetone and another organic solvent. The organic solvent is an ether having 3 to 12 carbon atoms, a ketone having 4 to 12 carbon atom, an ester having 3 to 12 carbon atoms, or an alcohol having 1 to 6 carbon atoms. In the second embodiment, the solvent is the ether, the ketone or the ester. Processes for the preparation of the solution and a cellulose

acetate film are also disclosed.

3. 5,495,860, Mar. 5, 1996, Structures formed from **cellulose acetate**, use thereof for the manufacture of filter tow, use of the filter tow for the manufacture of a tobacco smoke filter element, as well as a filter tow and a tobacco filter element; Eberhard Teufel, et al., 131/331, 345; 493/39 [IMAGE AVAILABLE]

US PAT NO: 5,495,860 [IMAGE AVAILABLE] L10: 3 of 33

ABSTRACT:
Structures are formed from cellulose acetate in which an additive is present or on this surface the additive consisting of a nitrogenous organic compound which by degradation by microorganisms forms basic decomposition products, in particular ammonia, and/or--basic--compounds having an NH group or NH groups and/or an NH.sub.2 group or NH.sub.2 groups. The structures may have the form of filaments, staple fibers, films, foils, sheets or other objects. The structures in the form of filaments and/or staple fibers are used for the manufacture of filter tows. The filter tow of this kind is described. The filter tow is for the manufacture of a tobacco smoke filter element, and such a tobacco smoke filter element is described. The structures, the filter tow, and the tobacco smoke filter element according to the invention show improved biodegradation under the action of environmental influences, the filter tow and the tobacco smoke filter element being capable of being stored under the conditions customarily used today without danger of microbiological degradation.

4. 5,338,785, Aug. 16, 1994, Flexible packaging printing ink containing **cellulose acetate** butyrate; Robert J. Catena, et al., 524/39, 391 [IMAGE AVAILABLE]

US PAT NO: 5,338,785 [IMAGE AVAILABLE] L10: 4 of 33

ABSTRACT:
A flexible packaging printing ink is formulated from a copolymer of polyethyleneneglycol methacrylate and a polyamide resin, pigment, solvent and cellulose acetate butyrate. The polyamide resin is prepared by condensing a dibasic acid mixture with a diamine mixture. The dibasic acid mixture comprises about 0.5 to 0.8 equivalents of a C.sub.20 -C.sub.44 dibasic acid mixture comprised of about 60 to 100% dimers, 0 to 40% trimers and 0 to 5% monomers, and about 0.2-0.7 equivalents of at least one C.sub.6 -C.sub.12 dibasic acid such as azelaic acid and adipic acid, while the diamine mixture comprises about 0.5-0.8 equivalents of piperazine or a substituted piperazine and the balance comprises at least one C.sub.2 -C.sub.12 alkyl diamine such as ethylene diamine.

5. 5,096,468, Mar. 17, 1992, **Cellulose acetate** butyrate gas separation membranes; Bhupender S. Minhas, 95/51; 96/14 [IMAGE AVAILABLE]

US PAT NO: 5,096,468 [IMAGE AVAILABLE] L10: 5 of 33

ABSTRACT:
High performance cellulose acetate butyrate gas separation membranes are prepared from a casting solution containing from about 10 to 30 percent polymer, 35 to 70 percent solvent, and 15 to 30 percent pore-forming agents. A film casting solution is cast onto a substantially flat support surface and a dense layer is formed on the exposed film surface. The film is gelled, washed, and dried to produce a particularly useful gas separation membrane. The cellulose acetate polymers used in this preparation have molecular weights of at least about 20,000, and have about 10 to about 45% butyryl groups, about 2 to about 35% acetyl groups, and about 0.8 to about 2 percent hydroxyl groups, by weight. The membranes may be used for separating a feed gas into a permeate fraction and a residual fraction, and are particularly useful for separating gases

in the purge gas stream of ammonia plants to recover a permeate which is relatively rich in hydrogen. Cellulose acetate butyrate membranes may be used to improve the separation of ammonia plant purge gases which contain ammonia as well as hydrogen and nitrogen, especially when there is no pretreatment of the purge gas to remove ammonia gas.

6. 5,086,144, Feb. 4, 1992, Acid-functional polymers derived from **cellulose acetate** butyrate unsaturated alcohol copolymers and coatings prepared from same; Mohamad D. Shalati, et al., 527/313; 428/413, 414; 527/314, 315 [IMAGE AVAILABLE]

US PAT NO: 5,086,144 [IMAGE AVAILABLE] L10: 6 of 33

ABSTRACT:
Novel carboxylic acid-functional polymers are obtained by reacting:
(a) a hydroxy-functional polymer having an average of at least two hydroxyl groups per molecule; and
(b) a cyclic anhydride under reaction conditions to produce acid groups and ester groups; and
wherein the hydroxy-functional polymer is obtained by the copolymerization of:
(i) 1-95 weight percent of a cellulose ester; and
(ii) 5-99 weight percent of at least one ethylenically unsaturated alcohol copolymerizable with the cellulose acetate butyrate; and
(iii) 0-94 weight percent of at least one other ethylenically unsaturated monomer copolymerizable with the cellulose ester and the ethylenically unsaturated alcohol.
Curable compositions especially useful as coatings are prepared by mixing the novel carboxylic acid-functional polymers with epoxy-functional compounds and, optionally, with anhydridefunctional compounds and, optionally, hydroxy-functional compounds. The coatings are especially useful in clearcoat/basecoat compositions.

7. 4,997,599, Mar. 5, 1991, Preparation of water soluble **cellulose acetate** microspheres; Thomas L. Steiner, et al., 264/5, 4.3, 4.6; 424/461, 488, 499; 428/402.2; 512/4; 514/963 [IMAGE AVAILABLE]

US PAT NO: 4,997,599 [IMAGE AVAILABLE] L10: 7 of 33

ABSTRACT:
Microparticle of cellulose acetate and derivatives thereof characterized by being water soluble, having a large interior void space and having a plurality of open exterior surface pores. These water soluble microparticles can be loaded with a chemical selected from the group consisting of pharmaceuticals, dyes, flavorings, agriculturals, solid catalysts and fragrances. The microparticles are produced by forming spherical droplets of a dope of water soluble cellulose acetate and water soluble derivatives of cellulose acetate with a solvent therefor, precipitating the spherical droplets in a bath of a precipitant for water soluble cellulose acetate and water soluble derivatives of cellulose acetate, separating the excess precipitant from the microparticles, enriching the microparticles with the precipitant by contacting the microparticles one or more times with a solution of the precipitant, removing rapidly under vacuum substantially all of the precipitant from the microparticles, and recovering the resulting water soluble microparticles.

8. 4,916,044, Apr. 10, 1990, Color diffusion transfer element with auxillary neutralizing layer comprising **cellulose acetate**; Hideki Tomiyama, 430/216; 428/507, 514, 532; 430/454, 463 [IMAGE AVAILABLE]

US PAT NO: 4,916,044 [IMAGE AVAILABLE] L10: 8 of 33

ABSTRACT:
A color photographic element for use in color diffusion transfer

photography comprised of a lightsensitive dye release and receiving sheet and a cover sheet, wherein development, dye release and dye transfer occur in the presence of an alkaline processing solution, and wherein the cover sheet is provided with a neutralizing system which causes neutralization by an alkaline processing solution to proceed by at least a first and a second stage, wherein the first stage is characterized in that neutralization (lowering) of the pH of an alkaline processing solution occurs to the extent to interrupt development and dye release reactions but at which the transfer of a dye for forming a transfer image can continue, and a second stage at which the pH of the processing solution is gradually lowered to a final value which is stably maintained over prolonged storage, the photographic element characterized in that the neutralizing system comprises at least a neutralizing layer, a 2nd neutralization timing layer, an auxiliary neutralizing layer, and a 1st neutralization timing layer as viewed from the support side, and that said auxiliary neutralizing layer contains 5 to 60% by weight of a cellulose acetate having an acetylation degree of 40 to 60.

9. 4,888,420, Dec. 19, 1989, Water soluble **cellulose acetate** microspheres; Thomas L. Steiner, et al., 536/64; 106/168.01; 536/69, 76, 77 [IMAGE AVAILABLE]

US PAT NO: 4,888,420 [IMAGE AVAILABLE] L10: 9 of 33

ABSTRACT:
Microparticle of cellulose acetate and derivatives thereof characterized by being water soluble, having a large interior void space and having a plurality of open exterior surface pores. These water soluble microparticles can be loaded with a chemical selected from the group consisting of pharmaceuticals, dyes, flavorings, agriculturals, solid catalysts and fragrances. The microparticles are produced by forming spherical droplets of a dope of water soluble cellulose acetate and water soluble derivatives of cellulose acetate with a solvent therefor, precipitating the spherical droplets in a bath of a precipitant for water soluble cellulose acetate and water soluble derivatives of cellulose acetate, separating the excess precipitant from the microparticles, enriching the microparticles with the precipitant by contacting the microparticles one or more times with a solution of the precipitant, removing rapidly under vacuum substantially all of the precipitant from the microparticles, and recovering the resulting water soluble microparticles.

10. 4,855,048, Aug. 8, 1989, Air dried **cellulose acetate** membranes; Man-Wing Tang, et al., 210/500.3; 264/49, 342R, 344, DIG.48 [IMAGE AVAILABLE]

US PAT NO: 4,855,048 [IMAGE AVAILABLE] L10: 10 of 33

ABSTRACT:
The method of preparing dried asymmetric cellulose acetate blend membranes through the use of at least one drying agent which is a hydrophobic organic compound, such as polysiloxanes, hydrocarbons, ethers, ketones, chlorohydrocarbons or nitrohydrocarbons. The membranes are dried from their aqueous state by direct evaporation of water. The resulting air dried membranes are suitable for the desalination of water by reverse osmosis, non-aqueous liquid separation, ultrafiltration, pervaporation, and for the separation of various gaseous mixtures into their constituent parts.

11. 4,543,409, Sep. 24, 1985, Water-insoluble fibers of **cellulose acetate**, cellulose propionate and cellulose butyrate with an extremely high absorptive capacity for water and physiological liquids; Michael Diamantoglou, et al., 536/68; 264/187; 428/364; 536/69 [IMAGE AVAILABLE]

US PAT NO: 4,543,409 [IMAGE AVAILABLE] L10: 11 of 33

ABSTRACT:
The invention refers to water-insoluble fibers of cellulose acetate cellulose propionate and cellulose butyrate with an extremely high absorptive capacity for water and physiological liquids and to a process for their preparation.

12. 4,460,648, Jul. 17, 1984, Porous bicomponent **acrylic** synthetic fibers comprising **cellulose acetate** in an **acrylic** matrix and method for producing said fibers; Yoshikazu Kondo, et al., 428/373; 264/41, 177.14, 182; 428/370, 374, 376, 398, 400 [IMAGE AVAILABLE]

US PAT NO: 4,460,648 [IMAGE AVAILABLE] L10: 12 of 33

ABSTRACT:
Porous **acrylic** synthetic fibers having water absorption property and having substantially no microvoids but having mainly macrovoids are produced by spinning an organic solvent solution containing 15.about.35% by weight of a polymer consisting of 2.about.30 parts by weight of **cellulose acetate** and 70.about.98 parts by weight of an **acrylic** polymer into a coagulation bath at a temperature of no higher than 30.degree. C., primarily drawing the spun fibers at a draw ratio of 2.5.about.8.0 times to form water swelled fibers wherein macrovoids are distributed, drying the water swelled fibers at a temperature of 100.degree..about.180.degree. C. to a water content of no greater than 1.0% by weight and secondarily drawing the dried fibers under wet heat to elongate the macrovoid structure.
This invention includes **acrylic** composite fibers having water absorption property wherein at least one of components A and B consisting of 2.about.50% by weight of **cellulose acetate** and 50.about.98% by weight of an **acrylic** polymer and another component B consisting of an **acrylic** polymer are bonded in a conjugate ratio of 2/8.about.8/2 (by weight) along the fiber axial direction, one component A has substantially no microvoid but has mainly macrovoids, and the method for producing said **acrylic** composite fibers.

13. 4,451,597, May 29, 1984, High solids color coat containing alcohol soluble **cellulose acetate** butyrate; Claus Victorius, 524/39; 427/409; 428/31, 402, 418; 524/40, 437, 512; 528/44, 48 [IMAGE AVAILABLE]

US PAT NO: 4,451,597 [IMAGE AVAILABLE] L10: 13 of 33

ABSTRACT:
The coating composition useful as the exterior finish on automobiles and trucks contains about 25-50% by weight of a binder of film-forming constituents and 50-75% by weight of a volatile organic solvent carrier and additionally contains 2-150% by weight, based on the weight of the binder, of pigment; the binder is about 20-70% by weight of an **acrylic** polymer containing reactive hydroxyl, carboxyl, amide groups or any mixture of such groups, about 0-40% by weight of a hydroxy-terminated polyester urethane resin and about 25-40% by weight of an alkylated melamine formaldehyde crosslinking resin; in addition the composition contains about 4-20% by weight, based on the weight of the binder, of a rheology control agent of an alcohol soluble **cellulose acetate** butyrate having a buryryl content of about 45-50% by weight, a hydroxyl content of about 4-5% by weight and a viscosity of about 0.2-0.4 second.

14. 4,395,377, Jul. 26, 1983, Porous **acrylic** synthetic fibers comprising **cellulose acetate** in an **acrylic** matrix and method for producing said fibers; Yoshikazu Kondo, et al., 264/46.1, 177.13, 210.2, 210.7, 210.8 [IMAGE AVAILABLE]

US PAT NO: 4,395,377 [IMAGE AVAILABLE] L10: 14 of 33

ABSTRACT:
Porous **acrylic** synthetic fibers having water absorption property and having substantially no microvoids but having mainly macrovoids are produced by spinning an organic solvent solution containing 15.about.35% by weight of a polymer consisting of 2.about.30 parts by weight of **cellulose acetate** and 70.about.98 parts by weight of an **acrylic** polymer into a coagulation bath at a temperature of no higher than 30.degree. C., primarily drawing the spun fibers at a draw ratio of 2.5.about.8.0 times to form water swelled fibers wherein macrovoids are distributed, drying the water swelled fibers at a temperature of 100.about.180.degree. C. to a water content of no greater than 1.0% by weight and secondarily drawing the dried fibers under wet heat to elongate the macrovoid structure.
This invention includes **acrylic** composite fibers having water absorption property wherein at least one of components A and B consisting of 2.about.50% by weight of **cellulose acetate** and 50.about.98% by weight of an **acrylic** polymer and another component B consisting of an **acrylic** polymer are bonded in a conjugate ratio of 2/8.about.8/2 (by weight) along the fiber axial direction, one component A has substantially no microvoid but has mainly macrovoids, and the method for producing said **acrylic** composite fibers.

15. 4,351,879, Sep. 28, 1982, Porous **acrylic** synthetic fibers comprising **cellulose acetate** in an **acrylic** matrix; Yoshikazu Kondo, et al., 428/374; 264/46.1, 177.13; 428/376, 398; 521/134, 149 [IMAGE AVAILABLE]

US PAT NO: 4,351,879 [IMAGE AVAILABLE] L10: 15 of 33

ABSTRACT:
Porous **acrylic** synthetic fibers having water absorption property and having substantially no microvoids but having mainly macrovoids are produced by spinning an organic solvent solution containing 15.about.35% by weight of a polymer consisting of 2.about.30 parts by weight of **cellulose acetate** and 70.about.98 parts by weight of an **acrylic** polymer into a coagulation bath at a temperature of no higher than 30.degree. C., primarily drawing the spun fibers at a draw ratio of 2.5.about.8.0 times to form water swelled fibers wherein macrovoids are distributed, drying the water swelled fibers at a temperature of 100.about.180.degree. C. to a water content of no greater than 1.0% by weight and secondarily drawing the dried fibers under wet heat to elongate the macrovoid structure.
This invention includes **acrylic** composite fibers having the water absorption property, wherein at least one of components A and B consisting of 2.about.50% by weight of **cellulose acetate** and 50.about.98% by weight of an **acrylic** polymer and another component B consisting of an **acrylic** polymer are bonded in a conjugate ratio of 2/8.about.8/2 (by weight) along the fiber axial direction, one component A having substantially no microvoids but having mainly macrovoids, and a method for producing said **acrylic** composite fibers.

16. 4,331,728, May 25, 1982, Laminate made of a **cellulose acetate** layer and an elastomeric material layer; Felix Theeuwes, 428/215; 210/500.42; 428/216, 496, 508, 509, 510 [IMAGE AVAILABLE]

US PAT NO: 4,331,728 [IMAGE AVAILABLE] L10: 16 of 33

ABSTRACT:
An osmotic system for delivering a beneficial agent is disclosed. The system comprises a wall surrounding a compartment and has a passageway through the wall for delivering agent from the compartment. The wall is formed of a material permeable to the passage of an external fluid and impermeable to the passage of agent. The compartment contains (1) an agent that is soluble in the fluid and exhibits an osmotic pressure

gradient across the wall against the fluid, or (2) the compartment contains an agent having limited solubility in the fluid and exhibits a limited osmotic pressure gradient across the wall against the fluid. The compartment also contains along with (1) or (2) a volume amplifier for increasing the amount of agent delivered from the system. The amplifier comprises a membrane surrounding a gas generating couple with the membrane formed of an expandable material permeable to fluid and impermeable to the couple. In operation, agent is delivered from the system through the passageway at a controlled rate by fluid being imbibed through the wall into the compartment to produce a solution of (1), or a suspension of (2), and for imbibition by the amplifier causing the couple to generate gas and continuously fill the amplifier thereby urging it to increase in volume and fill the compartment whereby agent (1) or (2) is released at a rate controlled by the permeability of the wall, the osmotic pressure gradient across the wall, and the rate of imbibition and increase in volume of the amplifier over a prolonged period of time.

17. 4,252,697, Feb. 24, 1981, Process for preparing an aqueous dispersion of synthetic resin mutually dissolved with a **cellulose acetate** alkylate; Yoshio Hashizume, et al., 524/733; 526/200 [IMAGE AVAILABLE]

US PAT NO: 4,252,697 [IMAGE AVAILABLE] L10: 17 of 33

ABSTRACT:
An aqueous dispersion of synthetic resin mutually dissolved with a cellulose acetate alkylate is prepared by mixing water, a protective colloid and/or a surfactant, a cellulose acetate alkylate, an oil-soluble radical polymerization initiator and at least one monomer in which the cellulose acetate alkylate and the oil-soluble radical polymerization initiator are soluble, under stirring, to form an aqueous dispersion and then subjecting the monomer to radical polymerization to form a homogeneous mixture of the cellulose acetate alkylate and at least one polymer in the particles in the aqueous dispersion.

18. 4,235,735, Nov. 25, 1980, Laundry detergent containing **cellulose acetate** anti-redeposition agent; Francis W. Marco, et al., 510/276, 337, 338, 340, 351, 407, 473 [IMAGE AVAILABLE]

US PAT NO: 4,235,735 [IMAGE AVAILABLE] L10: 18 of 33

ABSTRACT:
A detergent composition is provided which contains a detergent and a cellulose acetate polymeric anti-redeposition agent having a degree of substitution of the acetyl moiety of from about 0.5 to about 2.3. The cellulose acetate polymeric anti-redeposition agent may be represented by the formula ##STR1## wherein x is an integer of at least about 25, n is about 2.5 to about 0.7, and the expression 3-n is the degree of substitution of the acetyl moiety.

19. 4,168,249, Sep. 18, 1979, **Acrylic** lacquer coating composition of polymethyl methacrylate, copolymers of methyl methacrylate, **cellulose acetate** butyrate and a polyester plasticizer; Walter C. Meyer, 524/40; 428/480, 522, 532; 524/296; 525/375 [IMAGE AVAILABLE]

US PAT NO: 4,168,249 [IMAGE AVAILABLE] L10: 19 of 33

ABSTRACT:
A coating composition for finishing the exterior of automobile and truck bodies having a film forming binder of the following constituents:
(a) polymethyl methacrylate;
(b) a copolymer of methyl methacrylate and an alkyl amino alkyl methacrylate such as diethyl amino ethyl methacrylate;
(c) a copolymer of methyl methacrylate and an alkyl acrylate such as butyl acrylate;

(d) cellulose acetate butyrate;
(e) a polyester plasticizer
(f) a polymer of methyl methacrylate, an alkyl acrylate and an .alpha.-.beta. ethylenically unsaturated monocarboxylic acid such as acrylic acid or methacrylic acid reacted with an alkylene imine such as propylene imine;
The composition has good adhesion to lacquer and enamel finishes used on automobiles and truck bodies and is excellent for refinishing automobile and truck bodies.

20. 4,029,849, Jun. 14, 1977, Cover sheets with timing layer comprising **cellulose acetate** and copolymer of maleic anhydride; Edward P. Abel, 428/500, 507, 510, 515, 520, 532, 534; 430/322, 463 [IMAGE AVAILABLE]

US PAT NO: 4,029,849 [IMAGE AVAILABLE] L10: 20 of 33

ABSTRACT:
Timing layer for color diffusion transfer assemblages comprises a mixture of cellulose acetate and a maleic anhydride copolymer with 2 to 20% by weight of the mixture being said copolymer.

21. 4,027,066, May 31, 1977, Thermosetting powder coating composition of an **acrylic** polymer, dodecanedioic acid, **cellulose acetate** butyrate and a cross-linking agent; Claus Victorius, 428/334, 327, 335, 336, 402, 418, 457, 460, 461, 463; 524/39, 40; 525/161 [IMAGE AVAILABLE]

US PAT NO: 4,027,066 [IMAGE AVAILABLE] L10: 21 of 33

ABSTRACT:
A thermosetting polymer powder coating composition comprising finely divided powder particles that have a diameter of about 1-100 microns wherein the powder particles are a blend of
A. an acrylic polymer of glycidyl methacrylate, an alkyl methacrylate or an alkyl acrylate having 1-12 carbon atoms in the alkyl groups,
B. dodecanedioic acid,
C. low viscosity cellulose acetate butyrate,
D. an alkylated melamine formaldehyde crosslinking agent, and
E. a blocked acid catalyst;
The powder coating composition is particularly useful as an exterior finish for automobile and truck bodies.

22. 4,009,030, Feb. 22, 1977, Timing layer for color transfer assemblages comprising a mixture of **cellulose acetate** and maleic anhydride copolymer; Edward P. Abel, 430/215; 428/500, 532; 430/236 [IMAGE AVAILABLE]

US PAT NO: 4,009,030 [IMAGE AVAILABLE] L10: 22 of 33

ABSTRACT:
Timing layer for color diffusion transfer assemblages comprises a mixture of cellulose acetate and a maleic anhydride copolymer with 2 to 20% by weight of the mixture being said copolymer.

23. 3,959,193, May 25, 1976, Utilization of **cellulose acetate** butyrate and aryl sulfonamide-formaldehyde resin containing dispersant; Edgar N. Putman, et al., 524/40; 252/363.5; 516/31, 33, 36; 524/39, 563, 567, 585, 589, 602 [IMAGE AVAILABLE]

US PAT NO: 3,959,193 [IMAGE AVAILABLE] L10: 23 of 33

ABSTRACT:
A combination of an aryl sulfonamide-formaldehyde resin and film forming material, such as cellulose acetate butyrate, which may further include a surfactant, such as a non-ionic surfactant including, for example, an

alkylarylpolyether, comprises a "universal" dispersant for resin additives, such as pigment materials. This composition generally includes 40 - 90 weight % of any of various types of additives, including pigments. The dispersant generally comprises from 30 - 80 weight % film former or binder, which may consist of cellulose acetate butyrate or a solid plasticizer, such as camphor, sucrose benzoate and dicyclohexylphthalate, and from 20 - 70 weight % of the aryl sulfonamide-formaldehyde resin. Apart from pigments, the additives may consist of fillers, extenders, etc., includng, for example, calcium carbonate, antimony oxide and magnesium silicate.

24. 3,932,191, Jan. 13, 1976, Electrodepositable coating compositions containing therein **cellulose acetate** butyrate and having improved adhesion; Robert D. Jerabek, et al., 106/170.27; 204/498; 524/39, 601 [IMAGE AVAILABLE]

US PAT NO: 3,932,191 [IMAGE AVAILABLE] L10: 24 of 33

ABSTRACT:
Electrodepositable compositions containing small amounts of cellulose acetate butyrate provide coatings having excellent adhesion to the substrate and to conventional topcoat compositions, wherein said cellulose acetate butyrate has a relatively high butyryl content. The electrodepositable compositions are comprised of water dispersible acid or base solubilized synthetic vehicle resins.

25. 3,883,453, May 13, 1975, Coating compositions containing **acrylic** polymers polymerized in the presence of **cellulose acetate** butyrate; Masao Takahashi, et al., 524/733, 854 [IMAGE AVAILABLE]

US PAT NO: 3,883,453 [IMAGE AVAILABLE] L10: 25 of 33

ABSTRACT:
Coating composition containing (A) 60 - 90 percent of a copolymer of mixed alkyl esters of **acrylic** or methacrylic acid or mixtures thereof in a **cellulose acetate** butyrate solution in the presence of peroxide catalyst, and (B) 10 - 40 percent amino resin.

26. 3,862,063, Jan. 21, 1975, THERMOSETTING **ACRYLIC** POWDER OF AN **ACRYLIC** POLYMER HAVING A HIGH GLASS TRANSITION TEMPERATURE, **CELLULOSE ACETATE** BUTYRATE, A REACTIVE PLASTICIZER AND A CROSS-LINKING AGENT; Paul H. Pettit, Jr., 524/40; 427/393.5 [IMAGE AVAILABLE]

US PAT NO: 3,862,063 [IMAGE AVAILABLE] L10: 26 of 33

ABSTRACT:
The thermosetting acrylic polymer powder coating composition comprises finely divided particles that have a diameter of 1-100 microns wherein the powder particles are a blend of
A. 50-85% by weight of acrylic polymer of methyl methacrylate or styrene, an alkyl methacrylate having 8-12 carbon atoms in the alkyl group or an alkyl acrylate having 2-12 carbon atoms in the alkyl group, a hydroxy alkyl acrylate or hydroxy alkyl methacrylate that has 2-4 carbon atoms in the alkyl group; the acrylic polymer has a weight average molecular weight of 10,000-25,000 and glass transition temperature of 71.degree.-95.degree.C and preferably is hydroxyl terminated;
B. 5-25 percent by weight of cellulose acetate butyrate;
C. 4.98-25 percent by weight of an alkylated melamine formaldehyde resin;
D. 5-15 percent by weight of a dihydroxy functional plasticizer;
E. 0.02-5.0% by weight of an acid catalyst blocked with a blocking agent;
The novel thermosetting acrylic powder coating composition is particularly useful as an exterior finish for automobile and truck bodies.

27. 3,862,062, Jan. 21, 1975, THERMOSETTING **ACRYLIC** POWDER OF AN **ACRYLIC** POLYMER HAVING LOW GLASS TRANSITION TEMPERATURE, **CELLULOSE ACETATE** BUTYRATE AND A CROSS-LINKING AGENT; Lee R. Harper, 524/40; 427/389.7, 421 [IMAGE AVAILABLE]

US PAT NO: 3,862,062 [IMAGE AVAILABLE] L10: 27 of 33

ABSTRACT:
The thermosetting acrylic polymer powder coating composition comprises finely divided particles having a diameter of 1-100 microns when the powder particles are a blend of

A. 50-80 percent by weight of an acrylic polymer of methyl methacrylate or styrene, an alkyl acrylate or an alkyl methacrylate having 2-12 carbon atoms in the alkyl group and a hydroxy alkyl acrylate or a hydroxy alkyl methacrylate each having 2-4 carbon atoms in the alkyl group;

Wherein the acrylic polymer has a glass transition temperature of 50.degree.C. to 70.degree.C. and a weight average molecular weight of 5,000-25,000 and the polymer is hydroxyl terminated;

B. 5-30 percent by weight of cellulose acetate butyrate having a viscosity of 0.01-2.0 seconds and the butyryl content of 25-60 percent;

C. 5-19.95 percent by weight of an alkylated melamine formaldehyde resin that has 1-8 carbon atoms in the alkyl group; and

D. 0.05-1 percent by weight of a blocked acid catalyst;

The powder composition can contain pigments and dyes;
The novel thermosetting powder coating composition is particularly useful as an exterior finish for automobiles, trucks, buses and other vehicles.

28. 3,816,150, Jun. 11, 1974, PROCESS FOR MODIFYING **CELLULOSE ACETATE**; Kiyoshi Ishii, et al., 106/170.41, 170.58 [IMAGE AVAILABLE]

US PAT NO: 3,816,150 [IMAGE AVAILABLE] L10: 28 of 33

ABSTRACT:
A process for modifying cellulose acetate by treating an object made of a mixed ester of cellulose and (1) acetic acid and (2) a polybasic carboxylic acid, i.e., a dibasic carboxylic acid and/or tribasic carboxylic acid, with a divalent or higher metal salt to impart solvent resistance to the object.

29. 3,676,377, Jul. 11, 1972, PROCESS FOR PREPARING A THERMOSETTING **ACRYLIC** ENAMEL MODIFIED WITH **CELLULOSE ACETATE** BUTYRATE; Terry P. Anderson, et al., 524/40; 428/63 [IMAGE AVAILABLE]

US PAT NO: 3,676,377 [IMAGE AVAILABLE] L10: 29 of 33

ABSTRACT:
The improved process for preparing a thermosetting **acrylic** enamel modified with **cellulose acetate** butyrate comprises the following steps:

1. forming pigment chips by mixing pigment particles, cellulose acetate butyrate, and an organic plasticizer on a roll mill having one hot roll and one cold roll;
2. forming a mill base by dissolving the pigment chips prepared in Step (1) in an organic solvent;
3. blending the mill base with an acrylic polymer having free hydroxyl groups and carboxyl groups and with a melamine/formaldehyde resin which has been at least partially reacted with an aliphatic monohydric alcohol having one to four carbon atoms.

30. 3,673,084, Jun. 27, 1972, REVERSE OSMOSIS AND PROCESS AND COMPOSITION FOR MANUFACTURING **CELLULOSE ACETATE** MEMBRANES WHEREIN THE SWELLING AGENT IS A DI-OR TRI-BASIC ALIPHATIC ACID; William M. King, et al., 210/655; 106/170.26; 210/500.3; 264/49 [IMAGE AVAILABLE]

US PAT NO: 3,673,084 [IMAGE AVAILABLE] L10: 30 of 33

ABSTRACT:
A casting solution for the preparation of a cellulose membrance containing cellulose acetate, an organic solvent and a water-soluble organic swelling agent, which is capable of hydrogen bonding with ketone and hydroxyl groups of the cellulose acetate, said organic swelling agent being present in an amount between about 1.0 to about 10 parts by weight of each 10 parts of the cellulose acetate, said organic swelling agent being of a different composition than the organic solvent and being, for example, a di- or a tri-basic aliphatic acid having from two to 13 carbon atoms.

31. 3,657,001, Apr. 18, 1972, PROCESS FOR HOT SPRAYING A THERMOSETTING **ACRYLIC** ENAMEL MODIFIED WITH **CELLULOSE ACETATE** BUTYRATE; Fred W. Parker, 427/388.3, 422; 524/40; 526/318.3, 318.42 [IMAGE AVAILABLE]

US PAT NO: 3,657,001 [IMAGE AVAILABLE] L10: 31 of 33

ABSTRACT:
The process for hot spraying a paint of a thermosetting **acrylic** enamel modified with **cellulose acetate** butyrate comprises the following steps:

1. heating the paint having a high solids content of film-forming materials to about 50.degree.-100.degree. C. to reduce the viscosity of the paint;

Wherein the film-forming materials of the paint consist essentially of:

A. an acrylic polymer containing styrene, methyl methacrylate, a soft constituent, such as an alkyl acrylate or an alkyl methacrylate other than methyl methacrylate, a hydroxy containing constituent which is either a hydroxy alkyl acrylate or a hydroxy alkyl methacrylate, and an .alpha.,.beta.-unsaturated monocarboxylic acid;

B. cellulose acetate butyrate; and

C. a thermosetting nitrogen containing resin;

2. spraying the paint onto a substrate with an air spray gun using a specific atomization pressure and a specific fluid flow; and

3. baking the coating substrate.

The novel process is particularly useful for applying a finish at a high solids content to automobiles and trucks in the manufacturing plant and in repair garages and has the advantage of using substantially less solvent than conventional finishes and thereby reduces air pollution.

32. 3,632,363, Jan. 4, 1972, **CELLULOSE ACETATE** AND NYLON FIBERS CONTAINING THIOREA DYESITES; Francis S. Moussalli, 106/170.44; 524/191, 212, 583, 585, 604, 606 [IMAGE AVAILABLE]

US PAT NO: 3,632,363 [IMAGE AVAILABLE] L10: 32 of 33

ABSTRACT:
There is provided a process for improving the dyeability and fading resistance of fiber, comprising mixing into said fiber prior to the time it is extruded and dried from about 0.1 to about 6 percent (by weight of fiber) of a compound of the formula ##SPC1##
wherein n is from 0 to about 18, there being a direct bond between the nitrogen atoms when n is 0.

33. 3,607,329, Sep. 21, 1971, **CELLULOSE ACETATE** BUTYRATE SEMIPERMEABLE MEMBRANES AND THEIR PRODUCTION; Serop Manjikian, 106/170.16; 210/500.3; 264/49, 217 [IMAGE AVAILABLE]

US PAT NO: 3,607,329 [IMAGE AVAILABLE] L10: 33 of 33

ABSTRACT:
Semipermeable membranes are produced by casting a solution consisting essentially of cellulose acetate butyrate, triethyl phosphate, a flux

promoter and an organic solvent into a film, and subsequently gelling the film by immersion in water. The membranes of the invention find particular utility in separation of solutes from solutions by osmosis or reverse osmosis.